

**SYSTEM-ON-A-CHIP STRUCTURE HAVING A MULTIPLE CHANNEL
BUS BRIDGE**

ABSTRACT

A system-on-a-chip integrated circuit structure includes a bridge having a
5 plurality of channels, a processor local bus connected to the bridge (wherein the
bridge includes a first channel dedicated to the processor local bus), at least one
logic device connected to the processor local bus, a peripheral device bus
connected to the bridge (wherein the bridge includes a second channel dedicated
to the peripheral device bus), at least one peripheral device connected to the
10 peripheral device bus, at least one memory unit connected to the bridge (wherein
the bridge includes a third channel dedicated to the memory unit), and at least one
input/output unit connected to the bridge (wherein the bridge includes a fourth
channel dedicated to the input/output unit).